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More Data Needed On Effect of LSD

DOES LSD CAUSE genetic damage? No issue is raised more often in question periods after popular talks on genetics, or in my mail.

It is a hard one to answer. There have been too many suspicious findings to write off any concern about damage to chromosomes. On the other hand, we do not really know the actual significance to human health of these findings.

It is also hard to preserve honest objectivity in the face of two facts: that LSD usage is officially and socially condemned; and that serious psychiatric disease is elicited in many youngsters by chronic use of the drug while there are many more whose entrapment by the drug culture is as vicious as the tobacco and booze habits of their intemperate elders.

However, before we lean toward the law for the benefit of any doubt, we should remember how anxious many young people are about LSD. Did their brief fling before they tired of a frightening fantasia break their chromosomes? Are they fit to be parents?

THE MOST concrete findings concern chromosome breakage in white blood cells exposed to LSD both in artificial culture and in the body. An extensive report was published just a year ago in the New England journal of Medicine by Drs. M. M. Cohen, K. Hirschhorn and W. A. Frosch of three separate New York State medical schools (Buffalo, Mount Sinai and New York University-Bellevue). No more recent work supersedes their report.

quillizer, chlorpromazine and possibly even aspirin.

Our present knowledge is altogether too flimsy to be either reassuring or admonitory. What, for example, is the significance of the 4 per cent of chromosome breaks among us normals

The last Congress showed manifestly less interest in basic research in genetics and cell biology than its predecessors. If this tendency persists, it will keep these anguishing questions from being answered by many capable investigators who are frustrated and demoralized in the present climate. In this sense, legislative coolness to science will cause at least as much unresolved genetic damage as the adolescent quest for an instant chemical mystique.

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in control subjects, about 4 per cent of the white cells show chromosomes breaks. This frequency increased from two- to five-fold, to a peak of over 20 per cent, in the white cells of LSD users. Similar results have been obtained by many other workers, but not all.

One interpretation is that chronic use of LSD multiplies the average genetic risk by a factor of two to five. This is not a pleasant prospect, especially from a population standpoint, but it is not a catastrophic burden for any individual. Presumably, isolated doses of LSD would have proportionally smaller effects. This theory supposes that the germ cells show only a small proportion of the effects seen in the white cells. There is some reason to believe that damaged germ cells would be partially eliminated in a period of a few months or years.

ANOTHER SOURCE of concern is direct damage to a developing fetus exposed to LSD taken by its mother. There are several reports of malformations among such infants, and in some species of experimental animals under LSD treatment, but the statistics are too thin to be rigorously persuasive, one way or another.

Meanwhile, it has been pointed out that several other drugs may be equally potent in breaking chromosomes, including the tran-